



Harold Agnew, the Laboratory's third director, rides his bike by the Laboratory's Study Center, which was completed during his tenure as director. (Photo: Los Alamos)

Remembering **HAROLD AGNEW**

Over the past decade, I've fielded some interesting questions as a Laboratory historian. Among the now-trite queries, such as those pertaining to alien autopsies and Area 51, one simple question stands out as my favorite: "Was I at the Trinity test?" That question was asked of me by Harold M. Agnew, the Laboratory's third director. Though initially puzzled, I confirmed that he indeed was not there. This prompted Harold to say: "Fine, I didn't think so. Luis [Alvarez, a wartime Los Alamos scientist and future Nobel laureate] said in his memoir I was, so I just wanted to make sure I wasn't." Classic Harold.

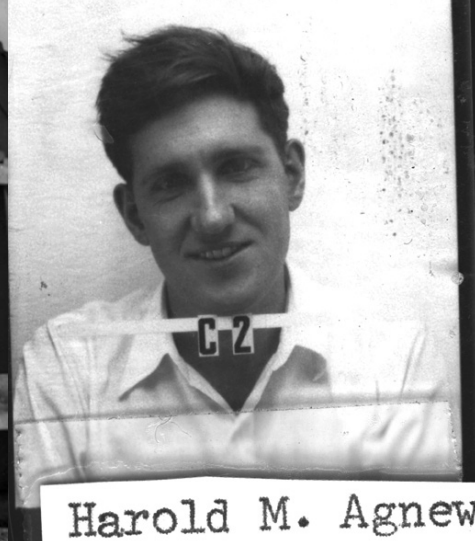
Harold Agnew grew up in Denver during the Great Depression. His father was a hard-working roofing contractor who always managed to put food on the table, although on one occasion Harold's family had to turn off the lights and pretend they weren't home when the rent collector came. Many considered Harold a cheapskate, but his thrifty ways were adopted early in his life out of necessity.

When he was a child, Harold's interest in science was sparked by a chemistry set he received as a gift. A few days before he died, Harold told me he still had that chemistry set in his possession. It helped launch a career in science that first took him to the University of Denver, where he studied chemistry and started dating his future wife, a lovely student named Beverly, who worked in the dean's office.

Only months after the Japanese attack on Pearl Harbor, Harold and Beverly, who were still dating, both decided to join the Army Air Corps. However, because of his training as a chemist, Harold was instead recruited to work for the Manhattan Project under Nobel laureate Enrico Fermi at the University of Chicago. As a member of Fermi's team, Harold helped build the world's first nuclear reactor and on December 2, 1942, witnessed it produce the world's first sustained chain reaction.

Now married, the Agnews followed Fermi to Los Alamos in the spring of 1943. Beverly served as a secretary for the Lab's first director, J. Robert Oppenheimer. Harold, among other things, helped design and build diagnostic instruments to measure the atomic blasts.

When the Trinity test was conducted on July 16, 1945, Harold was already on Tinian Island preparing for the atomic strikes against Japan. As a member of the scientific observation team, he filmed the attack on Hiroshima—for posterity, on his own initiative. As the bright light from the flash enveloped the plane's cabin, Harold thought, "It worked! It really worked!" Many years later, when asked if he had any regrets about the atomic bombings, Harold replied, "From Pearl Harbor, to Bataan, to Nanking; all the atrocities that took place, all the grief that we suffered. I just felt they bloody-well deserved it." Although Harold and Beverly did not join the military, many



(Left) Harold holds a case containing the plutonium for the Fat Man bomb (dropped on Nagasaki) on Tinian Island in the closing days of World War II. The Agnews were two of the earliest residents of wartime Los Alamos, then known as Project Y. (Right) Harold's Project Y identification photo. (Photos: Los Alamos)

of their friends did. Harold would often remind us that several of them never made it home.

After the war, Harold returned to the University of Chicago to complete his Ph.D. in physics. When he came back to Los Alamos, he started working in the Weapons Program in the uncertain months following the detonation of Joe-1, the first Soviet nuclear test. As a weapons physicist, Harold truly was a pioneer. He played a major role in the development of deliverable thermonuclear weapons for the United States in the mid-1950s and during that time, had another brush with history. In 1952 Harold witnessed the world's first thermonuclear test. Code-named Ivy-Mike, the blast produced a yield of over 10 megatons, an explosion hundreds of times more powerful than the atomic bombs that had helped end World War II. The test left a lasting impression. Years later Harold said, "I've advocated that every five years, all world leaders should strip down and have to witness a multi-megaton shot. It would really put the fear of Allah, or God, or Mohammed, or Buddha, or somebody, in their veins. It's really quite a terrifying experience. . . ."

In the years that followed, Harold had a hand in developing a vast majority of the nation's stockpiled weapons. During a trip to Europe with NATO, he came up with an idea that would revolutionize weapons safety. When he saw that the only safety feature American nuclear weapons had was a guard with a rifle, he conceived the idea of the permissive action link (PAL). PALs, which ensure that weapons cannot be detonated without proper authorization, are now a standard feature on all U.S. nuclear weapons.

In 1970, when Harold became director, times were changing. The public was growing more fearful of nuclear technology, the Lab was facing budget problems, and the federal bureaucracy was rapidly expanding. In fact, Harold once said, "The ever increasing bureaucracy, composed of managers who require more and more detail, justification, and guaranteed schedules, will, in the not too distant future, completely eradicate our nation's world position in research and technology."

Nonetheless, Harold grew the Laboratory from 4,000 to 8,000 employees in the 1970s. His legacy as director is not merely

a laundry list of scientific achievements but is a new idea for what a national laboratory can be. Technical diversification started under his predecessor, Norris Bradbury, but every program had some tie back to nuclear weapons. Under Harold the truly multidisciplinary Laboratory of today was born. His legacy as director is given new life each time a Los Alamos scientist helps cure a disease, develops an energy-efficient technology, or makes a discovery on Mars.

Harold left the Laboratory in 1979 to become president of General Atomics in San Diego but returned to Los Alamos regularly. Throughout the 1980s he served as a science counselor to the Reagan administration and remained a vocal advocate for nuclear power.

Today's U.S. nuclear deterrent is largely Harold's legacy but so is our modern multidisciplinary Laboratory. He helped shape our world through advising many presidents on nuclear policy and never abandoned his bold yet personally modest demeanor. Harold was a phenomenal scientist, a dedicated patriot, and a good friend to so many of us. He passed away in September 2013 at the age of 92. We'll miss you, Harold. ✨

~ Alan Carr



After retiring from Los Alamos, Harold served as a scientific advisor to Ronald Reagan throughout Reagan's years in the White House. (Photo: Los Alamos)